Patent Claims

1. A method of decreasing oxygen consumption in animal including human during physical work which comprises

administering simultaneously to said animal including human efficacious amounts (a) of a first component selected from the group consisting of D-glucose, D-maltose, ethanol, glucogenic amines, glucogenic amino acids, amino acids which can be metabolized via glyoxylate, and dipeptides and pharmaceutically acceptable salts of glucogenic amino acids and amino acids which can be metabolized via glyoxylate and (b) of a second component selected from the group consisting of thiamine, pharmaceutically acceptable thiamine salts and combinations of folic acid and cyanocobalamin, with the proviso that the second component is thiamine or a pharmaceutically acceptable thiamine salt if the first component is D-glucose, D-maltose, a glucogenic amine, a glucogenic amino acid which cannot be metabolized via glyoxylate, or a dipeptide or pharmaceutically acceptable salt of a glucogenic which cannot be metabolized via glyoxylate, and

thereby producing an effect of decreased oxygen consumption during the physical work.

2. The method as claimed in claim 1, wherein the first component is selected from the group consisting of D-glucose, D-maltose, glucogenic amines, glucogenic amino acids, amino acids which can be metabolized via glyoxylate, and dipeptides and pharmaceutically acceptable salts of glucogenic amino acids and amino acids which can be metabolized via glyoxylate, and the second component is selected from the group consisting of thiamine and pharmaceutically acceptable thiamine salts.

3. The method as claimed in claim 2, wherein the first component is administered in a dose of at least 1

g and the second component is administered in a dose of at least 10 mg.

4. The method as claimed in claim 2, wherein the first component is a fruit juice or fruit concentrate, comprising natural D-glucose in an efficacious amount.

5. The method as claimed in claim 2, wherein the first component is selected from the group consisting of L-aspartic acid, pharmaceutically acceptable L-aspartates, L-phenylalanine, L-tyrosine and L-tryptophan.

6. The method as claimed in claim 2, further comprising simultaneous administration of a vitamin selected from the group consisting of ascorbic acid, pharmaceutically acceptable ascorbates and cyanocobalamin.

7. The method as claimed in claim 1, wherein the first component is selected from the group consisting of amino acids which can be metabolized via glyoxylate, and dipeptides and pharmaceutically acceptable salts thereof, and the second component is a combination of folic acid and cyanocobalamin.

8. The method as claimed in claim 7, wherein the first component is selected from the group consisting of glycine, L-serine, L-glutamic acid, and dipeptides and pharmaceutically acceptable salts thereof.

9. The method as claimed in claim 7, wherein the first component is administered in a dose of at least 1 g, folic acid is administered in a dose of at least 0.2 mg and cyanocobalamin is administered in a dose of at least 1 µg.

10. The method as claimed in claim 1, wherein the first component is ethanol and the second component is a combination of folic acid and cyanocobalamin.

11. The method as claimed in claim 10, wherein ethanol is administered in a dose of at least 0.2 g, folic acid is administered in a dose of at least 0.2 mg and cyanocobalamin is administered in a dose of at least 1 µg.

12. The method as claimed in claim 1, wherein the first component is ethanol and the second component is selected from the group consisting of thiamine and pharmaceutically acceptable thiamine salts.

13. The method as claimed in claim 12, further comprising simultaneous administration of an efficacious amount of biotin.

14. The method as claimed in claim 13, wherein ethanol is administered in a dose of at least 0.2 g, the second component is administered in a dose of at least 5 mg and biotin is administered in a dose of at least 0.1 mg.

15. The method as claimed in claim 1, further comprising simultaneous administration of a medicament selected from the group consisting of insulin, sulphonylurea derivatives having antidiabetic activity, glucocorticoids, chlorprothixene and thioxanthene.

16. The method as claimed in claim 15, wherein the medicament is a glucocorticoid and the first component is selected from the group consisting of ethanol and dipeptides of amino acids which can be metabolized via glyoxylate, and wherein administration is effected shortly before or during the physical work.

17. The method as claimed in claim 15, wherein the medicament is an antidiabetic sulphonylurea derivative and the first component is D-glucose, and wherein administration is effected on the day before the physical work.

18. The method as claimed in claim 1, wherein at least one of the components is gelled utilizing a gelling agent.

19. The method as claimed in claim 1, comprising administering a composition comprising the first component and the second component.

20. The method as claimed in claim 19, wherein the composition is gelled utilizing a gelling agent.

21. The method as claimed in claim 20, wherein the first component is selected from the group consisting

of D-glucose, D-maltose, ethanol and glucogenic amines, and the gelling agent is a gellable polymeric carbohydrate.

22. The method as claimed in claim 21, wherein the gellable polymeric carbohydrate is selected from the group consisting of agar-agar and pectin.

23. The method as claimed in claim 20, wherein the first component is selected from the group consisting of ethanol, glucogenic amines, glucogenic amino acids, amino acids which can be metabolized via glyoxylate, and dipeptides and pharmaceutically acceptable salts of glucogenic amino acids and amino acids which can be metabolized via glyoxylate, and the gelling agent is a gellable protein.

24. The method as claimed in claim 23, wherein the gellable protein is gelatin.

25. A method of decreasing oxygen consumption in animal including human during physical work which comprises

administering to said animal including human a composition comprising (a) an efficacious amount of a first component selected from the group consisting of D-glucose, D-maltose, ethanol, glucogenic amines, glucogenic amino acids, amino acids which can be metabolized via glyoxylate, and dipeptides and pharmaceutically acceptable salts of glucogenic amino acids and amino acids which can be metabolized via glyoxylate, (b) an efficacious amount of a second component selected from the group consisting of thiamine, pharmaceutically acceptable thiamine salts and combinations of folic acid and cyanocobalamin, with the proviso that the second component is thiamine or a pharmaceutically acceptable thiamine salt if the first component is D-glucose, D-maltose, a glucogenic amine, a glucogenic amino acid which cannot be metabolized via glyoxylate, or a dipeptide or pharmaceutically acceptable salt of a glucogenic amino acid which cannot

be metabolized via glyoxylate, and (c) a gelling agent in gelled form, and

thereby producing an effect of decreased oxygen consumption during the physical work.

26. The method as claimed in claim 25, wherein the first component is selected from the group consisting of D-glucose, D-maltose and glucogenic amines, the second component is selected from the group consisting of thiamine and pharmaceutically acceptable thiamine salts, and the gelling agent is a gellable polymeric carbohydrate.

27. The method as claimed in claim 26, wherein the gellable polymeric carbohydrate is selected from the group consisting of agar-agar and pectin.

28. The method as claimed in claim 26, wherein the composition comprises at least 100 mg of the first component and at least 1 mg of the second component.

29. The method as claimed in claim 26, wherein the composition further comprises an efficacious amount of a vitamin selected from the group consisting of ascorbic acid, pharmaceutically acceptable ascorbates and cyanocobalamin.

30. The method as claimed in claim 25, wherein the first component is ethanol, the second component is selected from the group consisting of thiamine and pharmaceutically acceptable thiamine salts, and the gelling agent is selected from the group consisting of gellable polymeric carbohydrates and gellable proteins.

31. The method as claimed in claim 30, wherein the composition comprises at least 10 mg of ethanol and at least 0.5 mg of the second component.

32. The method as claimed in claim 30, wherein the composition further comprises an efficacious amount of biotin.

33. The method as claimed in claim 25, wherein the first component is ethanol, the second component is a combination of folic acid and cyanocobalamin, and the

gelling agent is selected from the group consisting of gellable polymeric carbohydrates and gellable proteins.

34. The method as claimed in claim 33, wherein the composition comprises at least 10 mg of ethanol, at least 0.1 mg of folic acid, and at least 1 μg of cyanocobalamin.

35. The method as claimed in claim 25, wherein the first component is selected from the group consisting of glucogenic amino acids, amino acids which can be metabolized via glyoxylate, and dipeptides and pharmaceutically acceptable salts of glucogenic amino acids and amino acids which can be metabolized via glyoxylate, the second component is selected from the group consisting of thiamine and pharmaceutically acceptable thiamine salts, and the gelling agent is a gellable protein.

36. The method as claimed in claim 35, wherein the composition comprises at least 1 mg of the first component and at least 1 mg of the second component.

37. The method as claimed in claim 35, wherein the first component is selected from the group consisting of L-aspartic acid, pharmaceutically acceptable L-aspartates, L-phenylalanine, L-tyrosine and L-tryptophan.

38. The method as claimed in claim 25, wherein the first component is selected from the group consisting of amino acids which can be metabolized via glyoxylate and dipeptides and pharmaceutically acceptable salts of amino acids which can be metabolized via glyoxylate, the second component is a combination of folic acid and cyanocobalamin, and the gelling agent is a gellable protein.

39. The method as claimed in claim 38, wherein the composition comprises at least 1 mg of the first component, at least 0.1 mg of folic acid and at least 1 μg of cyanocobalamin.

40. The method as claimed in claim 38, wherein the first component is a dipeptide selected from the group

consisting of H-Gly-Gly-OH, H-Ser-Ser-OH und H-Glu-Glu-OH, and wherein the composition comprises at least 1 mg of said dipeptide, at least 0.1 mg of folic acid and at least 1 µg of cyanocobalamin.

41. The method as claimed in claim 25, wherein the composition further comprises a efficacious amount of a medicament selected from the group consisting of insulin, sulphonylurea derivatives having antidiabetic activity, glucocorticoids, chlorprothixene and thioxanthene.

42. The method as claimed in claim 41, wherein the medicament is a glucocorticoid, the first component is selected from the group consisting of ethanol and dipeptides of amino acids which can be metabolized via glyoxylate and the gelling agent is selected from gellable polymeric carbohydrates and gellable proteins, and wherein administration of the composition is effected shortly before or during the physical work.

43. The method as claimed in claim 41, wherein the medicament is an antidiabetic sulphonylurea derivative, the first component is D-glucose, the second component is selected from the group consisting of thiamine and pharmaceutically acceptable thiamine salts and the gelling agent is a gellable polymeric carbohydrate, and wherein administration of the composition is effected on the day before the physical work.

44. The method as claimed in claim 43, wherein the gellable polymeric carbohydrate is selected from the group consisting of agar-agar and pectin.

45. The method as claimed in claim 43, wherein the wherein the composition comprises at least 100 mg of D-glucose and at least 1 mg of the second component.

46. The method as claimed in claim 43, wherein the composition further comprises an efficacious amount of a vitamin selected from the group consisting of ascorbic acid, pharmaceutically acceptable ascorbates and cyanocobalamin.

47. A composition for decreasing oxygen consumption during physical work, comprising (a) an efficacious amount of ethanol and (b) an efficacious amount of a combination of folic acid and cyanocobalamin or an efficacious amount of a combination of biotin and thiamine or a pharmaceutically acceptable thiamine salt.

48. The composition as claimed in claim 47, comprising ethanol in a dose unit of at least 0.2 g, folic acid in a dose unit of at least 0.2 mg and cyanocobalamin in a dose unit of at least 1 µg.

49. The composition as claimed in claim 47, comprising ethanol in a dose unit of at least 0.2 g, thiamine or a pharmaceutically acceptable thiamine salt in a dose unit of at least 5 mg and biotin in a dose unit of at least 0.1 mg.

50. A composition for decreasing oxygen consumption during physical work, comprising

(a) an efficacious amount of a first component selected from the group consisting of D-glucose, D-maltose, ethanol, glucogenic amines, glucogenic amino acids, amino acids which can be metabolized via glyoxylate, and dipeptides and pharmaceutically acceptable salts of glucogenic amino acids and amino acids which can be metabolized via glyoxylate,

(b) an efficacious amount of a second component selected from the group consisting of thiamine, pharmaceutically acceptable thiamine salts and combinations of folic acid and cyanocobalamin, with the proviso that the second component is thiamine or a pharmaceutically acceptable thiamine salt if the first component is D-glucose, D-maltose, a glucogenic amine, a glucogenic amino acid which cannot be metabolized via glyoxylate, or a dipeptide or pharmaceutically acceptable salt of such an amino acid, and

(c) a gelling agent in gelled form.

51. The composition as claimed in claim 50, wherein the first component is selected from the group

consisting of D-glucose, D-maltose and glucogenic amines, the second component is selected from the group consisting of thiamine and pharmaceutically acceptable thiamine salts, and the gelling agent is a gellable polymeric carbohydrate.

52. The composition as claimed in claim 51, wherein the gellable polymeric carbohydrate is selected from the group consisting of agar-agar and pectin.

53. The composition as claimed in claim 51, wherein the composition comprises at least 100 mg of the first component and at least 1 mg of the second component.

54. The composition as claimed in claim 51, wherein the composition further comprises an efficacious amount of a vitamin selected from the group consisting of ascorbic acid, pharmaceutically acceptable ascorbates and cyanocobalamin.

55. The composition as claimed in claim 50, wherein the first component is ethanol, the second component is selected from the group consisting of thiamine and pharmaceutically acceptable thiamine salts, and the gelling agent is selected from the group consisting of gellable polymeric carbohydrates and gellable proteins.

56. The composition as claimed in claim 55, wherein the composition comprises at least 10 mg of ethanol and at least 0.5 mg of the second component.

57. The composition as claimed in claim 55, wherein the composition further comprises an efficacious amount of biotin.

58. The composition as claimed in claim 50, wherein the first component is ethanol, the second component is a combination of folic acid and cyanocobalamin, and the gelling agent is selected from the group consisting of gellable polymeric carbohydrates and gellable proteins.

59. The composition as claimed in claim 58, wherein the composition comprises at least 10 mg of ethanol, at least 0.1 mg of folic acid, and at least 1 µg of cyanocobalamin.

60. The composition as claimed in claim 50, wherein the first component is selected from the group consisting of glucogenic amino acids, amino acids which can be metabolized via glyoxylate, and dipeptides and pharmaceutically acceptable salts of glucogenic amino acids and amino acids which can be metabolized via glyoxylate, the second component is selected from the group consisting of thiamine and pharmaceutically acceptable thiamine salts, and the gelling agent is a gellable protein.

61. The composition as claimed in claim 60, further comprising an efficacious amount of a vitamin selected from the group consisting of ascorbic acid, pharmaceutically acceptable ascorbates, cyanocobalamin, pyridoxine and pharmaceutically acceptable pyridoxine salts.

62. The composition as claimed in claim 60, wherein the composition comprises at least 1 mg of the first component and at least 1 mg of the second component.

63. The composition as claimed in claim 50, wherein the first component is selected from the group consisting of amino acids which can be metabolized via glyoxylate and dipeptides and pharmaceutically acceptable salts of amino acids which can be metabolized via glyoxylate, the second component is a combination of folic acid and cyanocobalamin, and the gelling agent is a gellable protein.

64. The composition as claimed in claim 63, wherein the gellable protein is gelatin.

65. The composition as claimed in claim 63, wherein the composition comprises at least 1 mg of the first component, at least 0.1 g of folic acid and at least 1 µg of cyanocobalamin.

66. The composition as claimed in claim 65, wherein the first component is a dipeptide selected from the group consisting of H-Gly-Gly-OH, H-Ser-Ser-OH und H-Glu-Glu-OH.

67. The composition as claimed in claim 50, wherein the composition further comprises a efficacious amount of a medicament selected from the group consisting of insulin, sulphonylurea derivatives having antidiabetic activity, glucocorticoids, chlorprothixene and thioxanthene.

68. The composition as claimed in claim 67, wherein the medicament is a glucocorticoid, the first component is selected from the group consisting of ethanol and dipeptides of amino acids which can be metabolized via glyoxylate and the gelling agent is selected from gellable polymeric carbohydrates and gellable proteins.

69. The composition as claimed in claim 67, wherein the medicament is an antidiabetic sulphonylurea derivative, the first component is D-glucose, the second component is selected from the group consisting of thiamine and pharmaceutically acceptable thiamine salts and the gelling agent is a gellable polymeric carbohydrate.

70. The composition as claimed in claim 69, wherein the gellable polymeric carbohydrate is selected from the group consisting of agar-agar and pectin.

71. The composition as claimed in claim 69, wherein the wherein the composition comprises at least 100 mg of D-glucose and at least 1 mg of the second component.

72. The composition as claimed in claim 69, wherein the composition further comprises an efficacious amount of a vitamin selected from the group consisting of ascorbic acid, pharmaceutically acceptable ascorbates and cyanocobalamin.